



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/756,858

01/14/2004

Kent E. Peterson

NORTE-523A

3419

7590

03/21/2005

Bruce B. Brunda
STETINA BRUNDA GARRED & BRUCKER
Suite 250
75 Enterprise
Aliso Viejo, CA 92656

EXAMINER

HAM, SEUNGSOOK


ART UNIT

PAPER NUMBER

2817

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/756,858</p>	<p>Applicant(s)</p> <p align="center">PETERSON ET AL. </p>	
	<p>Examiner</p> <p align="center">Seungsook Ham</p>	<p>Art Unit</p> <p align="center">2817</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☒ Claim(s) 1-14, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, 23 and 24 are, drawn to a ridge waveguide filter, classified in class 333, subclass 208.
- II. Claims 19-22 are, drawn to a method of manufacturing a ridge waveguide, classified in class 29, subclass 600.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by a materially different process such as a die-casting.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Bruce Brunda on 3/8/05, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-18, 23 and 24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 19-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 2817

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: a cross-sectional view along line "4-4", "5-5" and "6-6" (see p. 4, paragraphs [0017]-[0019]), and "small ridges 32a" (p. 5, line 10). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Art Unit: 2817

In the specification, paragraph [0022], it is unclear as to how the applicant is defining "ridge" and "trenches". It appears that ridge "32" should be changed to -34--, and trenches (i.e., hollow portion) "34" should be changed to -32--(see fig. 4).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-10, 12-14, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Mack et al. (US '520).

Mack et al. (figs. 3 and 15) discloses a ridge waveguide filter having a slow structure comprising: an elongate hollow tube defined by a conductive side wall 103, 107; at least one hollow ridge 111 protruding from the conductive sidewall into the hollow tube and extending along an elongate direction of the hollow tube; a plurality of equally spaced trenches (a gap between two adjacent projections 111) formed in the ridge along the elongated direction.

Regarding claims 23 and 24, Mack et al. (fig. 15) also show a method of making waveguide by processing the waveguide to form a plurality of ridge segments 175 separated from each other by a gap. It is inherent from the device of Mack et al. that a

Art Unit: 2817

plurality of inductances are provided between the ridge segments, and the segments are capacitively coupled to a bottom wall 105 of the waveguide.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-10, 12-14, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Brill (US '280).

Brill (see figure) discloses a ridge waveguide filter having a slow structure comprising: an elongate hollow tube defined by a conductive side wall 6, 7; at least one hollow ridge (protrusion at sections 11, 13, 15, 17) protruding from the conductive sidewall into the hollow tube and extending along an elongate direction of the hollow tube; a plurality of equally spaced trenches 12, 14, 16 formed in the ridge along the elongated direction.

Regarding claims 23 and 24, it is inherent from the device of Brill that a plurality of inductances are provided between the ridge segments 12, 14, 16, and the segments are capacitively coupled to a bottom wall of the waveguide through the sections 11, 13, 15, 17 (i.e., low pass filter, col. 2, lines 3-41).

Claims 1-3, 6-10, 12, 13, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Levy (US '710).

Levy (figs. 6-9C) discloses a ridge waveguide filter having a slow structure comprising: an elongate hollow tube defined by a conductive side wall (not shown); at least one hollow ridge 8, 9 protruding from the conductive sidewall into the hollow tube and extending along an elongate direction of the hollow tube; a plurality of equally spaced trenches I_1 - I_4 formed in the ridge along the elongated direction.

Art Unit: 2817

Regarding claims 23 and 24, it is inherent from the device of Levy (see also fig. 6A) that a plurality of inductances are provided between the ridge segments and the segments are capacitively coupled to a bottom wall of the waveguide through the sections (see fig. 9C).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mack et al. (US '520), Levy (US '710), or Brill (US '280).

Providing a circuit cross-section sidewall is considered as an obvious design modifications to obtain a desire filter characteristics, and it requires only a routine skill in the art.

Allowable Subject Matter

Claims 15-18 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The combination of method steps a) and e) in claim 15 is not shown nor suggested by any prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

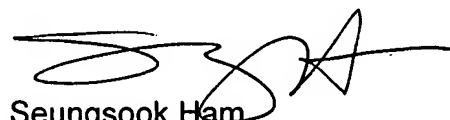
Art Unit: 2817

Mack et al. (US '696), Young (US '990), Goulouev (US '853), Ihmels (US '978), Waggett (US '631) and Saad (US '039) discloses a ridge waveguide filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Seungsook Ham
Primary Examiner
Art Unit 2817

sh